UNITED STATES PATENT AND TRADEMARK OFFICE

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/647,594	08/25/2003	S. Brandon Keller	100111230-1	2408

				EXAMINER
22879	7590	04/28/2005		LEVIN, NAUM B

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ART UNIT	PAPER NUMBER
2825	

DATE MAILED: 04/28/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

PTO-90C (Rev. 10/03)

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE _3_ MONTH(S) FROM
THE MAILING DATE OF THIS COMMUNICATION.
- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1) ☒ Responsive to communication(s) filed on _25 August 2003_.

2a) ☐ This action is **FINAL**.   2b) ☒ This action is non-final.

3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4) ☒ Claim(s) _1-20_ is/are pending in the application.

    4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5) ☐ Claim(s) _____ is/are allowed.

6) ☒ Claim(s) _1-20_ is/are rejected.

7) ☐ Claim(s) _____ is/are objected to.

8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9) ☐ The specification is objected to by the Examiner.

10) ☒ The drawing(s) filed on _25 August 2003_ is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.

    Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

    Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

    a) ☐ All   b) ☐ Some * c) ☐ None of:

      1. ☐ Certified copies of the priority documents have been received.

      2. ☐ Certified copies of the priority documents have been received in Application No. _____.

      3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

    * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)

2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)

3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _2/6/4, 1/20/5_.

4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .

5) ☐ Notice of Informal Patent Application (PTO-152)

6) ☐ Other: _____.

DETAILED ACTION

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that

form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

1. Claims 1-20 are rejected under 35 U.S.C. 102(b) as being unpatentable by

Khouja et al. (US Patent 5,668,732).

2. <u>As to claims 1, 6, 11 and 15</u> Khouja discloses:

(1) A method for determining activity factors of a circuit design, comprising:

assigning (specifying/establish) an activity factor (toggle rate, probability) to one

or more node types (inputs/outputs, endpoints types: synchronous/asynchronous)

(col.26, ll.41-46; col.34, ll.35-41; col.36, ll.4-22; col.47, ll.33-50);

reading (extracting) one or more signal nets from a netlist of the circuit design

(col.2, ll.39-40; col.13, ll.22-28; col.59, ll.1-67; col.60, ll.1-67; col.116, ll.45-48);

processing the signal nets to associate one of the node types with each of the

signal nets (col.36, ll.25-45); and

determining (calculating) an activity factor for each of the signal nets based upon

node type (col.34, ll.42-67; col.35, ll.1-7);

(6) A system for determining activity factors of a circuit design, comprising:

a circuit recognition tool responsive to control by an E-CAD (CAD) tool to determine node types of one or more signal nets of the circuit design (col.9, ll.57-67; col.10, ll.1-17; col.36, ll.25-45);

memory for storing activity factors associated with the node types, the activity factor being determined by node type (col.9, ll.24-56; col.26, ll.41-46; col.34, ll.35-41; col.36, ll.4-22; col.47, ll.33-50); and

an analysis tool being operable to access the memory to determine an activity factor for each of the signal nets based upon node type (col.9, ll.57-67; col.34, ll.42-67; col.35, ll.1-7);

(11) A system for determining activity factors of a circuit design, comprising:

means for reading one or more signal nets from a netlist of the circuit design (col.2, ll.39-40; col.9, ll.24-56; col.13, ll.22-28; col.59, ll.1-67; col.60, ll.1-67; col.116, ll.45-48);

means for processing the signal nets to determine a node type for each of the signal nets (col.9, ll.24-56; col.36, ll.25-45); and

means for determining an activity factor for each of the signal nets based upon node type (col.9, ll.24-56; col.34, ll.42-67; col.35, ll.1-7);

A software product comprising instructions, stored on computer-readable media, wherein the instructions, when executed by a computer, perform steps for determining activity factors of a circuit design, comprising (col.9, ll.24-56; col.26, ll.41-46; col.34, ll.35-41; col.36, ll.4-22; col.47, ll.33-50):

reading one or more signal nets from a netlist of the circuit design (col.2, ll.39-40;

col.13, ll.22-28; col.59, ll.1-67; col.60, ll.1-67; col.116, ll.45-48);

processing the signal nets to associate a node type with each of the signal nets

(col.36, ll.25-45); and

determining an activity factor for each of the signal nets based upon the node

type (col.34, ll.42-67; col.35, ll.1-7).

3. <u>As to claims 2-5, 7-10, 12-14 and 16-20</u> Khouja recites:

(2), (12), (16) The method/system/software, wherein the step of processing

comprising determining a node type selected from the group of static, dynamic, clock

and non-toggling (col.36, ll.4-45);

(3), (8), (18) The method/system/software, wherein the step of assigning

comprising storing the activity factor within a lookup table (col.8, ll.20-21; col.11, ll.1-34);

(4), (5), (19) The method/software, wherein the step of determining switching

power requirements comprising using the activity factor assigned to the node type of

each of the signal nets (col.11, ll.1-34; col.12, ll.34-63; col.51, ll.19-67; col.52, ll.1-67;

col.53, ll.1-30);

(7) The system of claim 6, the analysis tool being responsive to control by the E-

CAD tool to analyze the circuit design using the activity factors (col.9, ll.57-67; col.34,

ll.42-67; col.35, ll.1-7);

(9), (14), (20) The system/software, further comprising means for accepting user

inputs to specify the activity factors stored in the memory (col.9, ll.24-56);

(13), (17) The system/software, further comprising means for assigning an activity factor for each the node types (col.26, II.41-46; col.34, II.35-41; col.36, II.4-22; col.47, II.33-50).

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Naum B. Levin whose telephone number is 571-272-1898. The examiner can normally be reached on M-F (8:00-4:30).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Matthew S. Smith can be reached on 571-272-1907. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

NL

Naum Levin

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